CLAIMS

1. A column-and-beam join structure fabricated by connecting the flanges of split tees to a steel column using bolts and by engaging and connecting the webs of the split tees to the ends of the flanges of a steel beam using bolts, characterized by making either one or both of the web and the flange of a split tee yield in advance of the column or the beam.

2. A column-and-beam join structure fabricated by connecting the flanges of split tees to a steel column using bolts and by engaging and connecting the webs of the split tees to the ends of the flanges of a steel beam using bolts, characterized in that the upper limit of the yield stress of the steel material used for either one or both of the web and the flange of a split tee is defined to be not more than twice the lower limit thereof.

3. A column-and-beam join structure fabricated by connecting the flanges of split tees to a steel column using bolts and by engaging and connecting the webs of the split tees to the ends of the flanges of a steel beam using bolts, characterized in that a split tee has a shape wherein the cross-sectional area of the web is partially reduced so as to divide the base end portion of the web, the web extending from the flange of a split tee in the axial direction of the steel beam material, from the tip portion thereof to which a flange of the H-shaped steel beam is connected using bolts.

4. A column-and-beam join structure according to claim 3, characterized in that the upper limit of the yield stress of the steel material used for the web of a split tee at the portion where the cross-sectional area is partially reduced is defined to be not more than twice the lower limit thereof.

5. A column-and-beam join structure according to claim 3 or 4, characterized by placing the web, including the portion where the cross-sectional area of the web of a split tee is partially reduced, between a flange of the

steel beam and a section steel for buckling restraint, and connecting the web to them using bolts.

6. A column-and-beam join structure according to any one of claims 1 to 4, characterized by providing reinforcing plates, which protrude in the direction of the web and not touching the web, to both the side edges of the flange of a split tee.

7. A column-and-beam join structure according to claim 3 or 4, characterized by: providing reinforcing plates, which protrude in the direction of the web and not touching the web, to both the side edges of the flange of a split tee; and placing the web, including the portion where the cross-sectional area of the web of a split tee is partially reduced, between a flange of the steel beam and a section steel for buckling restraint, and connecting the web to them using bolts.

8. A column-and-beam join structure fabricated by connecting the flanges of split tees to a steel column using bolts and by engaging and connecting the webs of the split tees to the ends of the flanges of a steel beam using bolts, characterized in that: the upper limit of the yield stress of the steel material used for either one or both of the web and the flange of a split tee is defined to be not more than twice the lower limit thereof; and, at a portion where both ends of the flange of the split tee are connected to the steel column using bolts, space keeping members are inserted between the flange of the split tee and the steel column and the flange of the split tee and the steel column are connected in the state of maintaining the space.

9. A column-and-beam join structure according to claim 8, characterized in that a split tee has a shape wherein the cross-sectional area of the flange is partially reduced.

10. A column-and-beam join structure fabricated by connecting the flanges of a pair of upper and lower split tees to a steel column using bolts, by engaging and

connecting both the upper and lower flanges of a steel beam between the webs of both the upper and lower split tees using bolts, and by molding a concrete slab to either one of both the upper and lower flanges of the steel beam, characterized in that: the yield stress of the steel material used for the web of the split tee, to which the flange of the steel beam where the concrete slab has been molded is connected, is defined to be higher than the upper limit of the yield stress of the steel material used for the web of the other split tee; and the upper limit of the yield stress of the steel material used for the web of the other split tee is defined to be not more than twice the lower limit thereof.

11. A column-and-beam join structure according to claim 10, characterized in that the other split tee has a shape wherein the cross-sectional area of the web is partially reduced.

12. A column-and-beam join structure fabricated by connecting the flanges of a pair of upper and lower split tees to a steel column using bolts and by engaging and connecting both the upper and lower flanges of a steel beam between the webs of both the upper and lower split tees using bolts, characterized in that: one of the upper and lower split tees has a shape wherein the cross-sectional area of the web is partially reduced and the upper limit of the yield stress of the steel material used for the web is defined to be not more than twice the lower limit thereof; and the yield stress of the steel material used for the web of the other of the upper and lower split tees is defined to be higher than the upper limit of the yield stress of the steel material used for the web of the former split tee.

13. A column-and-beam join structure according to claim 11 or 12, characterized by placing the web, including the portion where the cross-sectional area of the web of a split tee is partially reduced, between a

flange of the steel beam and a section steel for buckling restraint, and connecting the web to them using bolts.

14. A column-and-beam join structure fabricated by connecting the flanges of a pair of upper and lower split tees to a steel column using bolts, by engaging and connecting both the upper and lower flanges of a steel beam between the webs of both the upper and lower split tees using bolts, and by molding a concrete slab to either one of both the upper and lower flanges of the steel beam, characterized in that: the yield stress of the steel material used for the flange of the split tee, to which the flange of the steel beam where the concrete slab has been molded is connected, is defined to be higher than the upper limit of the yield stress of the steel material used for the flange of the other split tee; the upper limit of the yield stress of the steel material used for the flange of the other split tee is defined to be not more than twice the lower limit thereof; and, at a portion where both ends of the flange of the other split tee are connected to the steel column using bolts, space keeping members are inserted between the flange of the split tee and the steel column and the flange of the split tee and the steel column are connected in the state of maintaining the space.

15. A column-and-beam join structure according to claim 14, characterized in that the other split tee has a shape wherein the cross-sectional area of the flange is partially reduced.

16. A column-and-beam join structure fabricated by connecting the flanges of a pair of upper and lower split tees to a steel column using bolts and by engaging and connecting both the upper and lower flanges of a steel beam between the webs of both the upper and lower split tees using bolts, characterized in that: the upper limit of the yield stress of the steel material used for the flange of one of the upper and lower split tees is defined to be not more than twice the lower limit

thereof; at a portion where both ends of the flange of the split tee are connected to the steel column using bolts, space keeping members are inserted between the flange of the split tee and the steel column and the flange of the split tee and the steel column are connected in the state of maintaining the space; and the yield stress of the steel material used for the flange of the other of the upper and lower split tees is defined to be higher than the upper limit of the yield stress of the steel material used for the flange of the former split tee.

17. A column-and-beam join structure according to claim 16, characterized in that the former split tee has a shape wherein the cross-sectional area of the flange is partially reduced.